

change, for example, if the vehicle is driving over a banked road, or on uneven terrain. The pitch angle is the angle that the vehicle makes in a vertical plane along the longitudinal direction. The pitch angle becomes significant if the vehicle is climbing up or descending down a hill. Taking into account the pitch and roll angles can make the projected image more accurate, and more closely conform to the actual image seen by the driver.

On page 21, line 28, after "warnings" please insert --, local speed limits--.

Of course, other objects can be displayed as well. Such objects can include water towers, trees, bridges, road dividers, other landmarks, etc... Such indicators can also be warnings, local speed limits or alarms such as not to turn the wrong way on a one-way road or an off ramp, that the vehicle is approaching an intersection or work zone at too high a high rate of speed. Further, where the combiner is equipped with an LCD film or embedded layer, it can perform other tasks as well. Such tasks can include the display of blocking templates which block out or reduce glare from the sun or headlights from other cars. The location of the sun can be computed from the time, and its position relative to the driver can also be computed (the same is true for cars). Therefore, an icon can simply be displayed to block the undesired glare. Similarly, the displays can be integrated with other operator perceptible features, such as a haptic feedback, sound, seat or steering wheel vibration, etc.

On page 24, line 29, delete "tobe" and insert --to be--.

The coordinate transformation block transforms the coordinate frame of the digital map from the global coordinate frame to the local coordinate frame. The local coordinate frame is a moving coordinate frame that is illustratively attached to the driver's head. The coordinate transformation is illustratively

performed by multiplying a four-by-four homogeneous transformation matrix to the road data points although any other coordinate system transformations can be used, such as the Quaternion or other approach. Because the vehicle is kept moving, the matrix must be updated in real time. Movement of the driver's eye that is included in the matrix is also measured and fed into the matrix calculation in real time. Where no head tracking system 32 is provided, then the head angle and position of the driver's eyes are assumed to be constant and the driver is assumed to be looking forward from a nominal position.

On page 36, line 9, after "]" please insert a space.

$${}^L p = {}^L_G [T_{rot}] {}^G P \quad \text{Eq. 6}$$

On page 36, line 17, after "]" please insert a space.

$${}^L p = {}^L_G [T] {}^G P \quad \text{Eq. 8}$$

On page 36, line 20, after "]", second occurrence, please insert a space.

$${}^L_G [T] = {}^L_G [T_{rot}] {}^L_G [T_{tran}]$$

On page 37, line 10, after "]" first occurrence, please insert a space.

On page 37, line 10, after "]" second occurrence, please insert a space.

On page 37, line 10, after "]" third occurrence, please insert a space.

$${}^L p = {}^L_V [T] {}^V_G [T] {}^G P = [T] {}^G P \quad \text{Eq. 10}$$

On page 43, line 25, after "Δ" please insert a space.

On page 43 line 25, after "k" insert a space.